Application No. 10/540,265

Reply to Office Action of May 28, 2009

IN THE CLAIMS

Please amend the claims as follows:

1-7. (Canceled).

8. (Currently Amended): A method for producing a vinyl-based polymer, comprising

the steps of:

a first step of continuously feeding a material mixture comprising a vinyl-based

monomer and a solvent selected from the group consisting of aromatic hydrocarbons,

ketones, esters, alcohols, and mixtures thereof, to a continuous tank first reactor and

polymerizing the vinyl-based monomer under conditions of a polymerization temperature of

150° to 300°C and a retention time of 1 to 60 minutes at a rate of polymerization of 50 to

99% to obtain a reaction intermediate mixture, wherein the material mixture is continuously

fed to the first reactor after preheating; and

a second step of feeding a polymerization initiator in the amount of 0.01 to 5 parts by

mass based on 100 parts by mass of the vinyl-based monomer and the reaction intermediate

mixture to a second reactor, and further polymerizing the vinyl-based monomer under

conditions of a polymerization temperature of 100° to 200°C and a retention time of 10 to

240 minutes at a rate of polymerization of 80% or more.

9. (Original): The method for producing a vinyl-based polymer according to claim 8,

wherein a resulting polymer has a mass average molecular weight of 1500 to 10000.

10. (Original): The method for producing a vinyl-based polymer according to claim

8, wherein the material mixture contains the polymerization initiator in an amount of 0.01 to

12 parts by mass based on 100 parts by mass of the vinyl-based monomer.

2

Application No. 10/540,265

Reply to Office Action of May 28, 2009

11. (Original): The method for producing a vinyl-based polymer according to claim

10, wherein the polymerization initiator is used in an amount of 0.01 to 8 parts by mass based

on 100 parts by mass of the vinyl-based monomer.

12. (Original): The method for producing a vinyl-based polymer according to claim

8, wherein the material mixture contains a solvent in an amount of 200 parts by mass or less

based on 100 parts by mass of the vinyl-based monomer.

13. (Original): The method for producing a vinyl-based polymer according to claim

12, wherein a content of the solvent is 2 to 100 parts by mass based on 100 parts by mass of

the vinyl-based monomer.

14. (Canceled).

15. (Original): The method for producing a vinyl-based polymer according to claim

8, wherein the polymerization temperature in the first step is 200° to 280°C.

16. (Original): The method for producing a vinyl-based polymer according to claim

8, wherein the rate of polymerization in the first step is 80 to 98%.

17-20. (Canceled).

21. (Previously Presented): The method of claim 8, wherein the solvent is selected

from the group consisting of aromatic hydrocarbons, ketones, and mixtures thereof.

3

Application No. 10/540,265 Reply to Office Action of May 28, 2009

22. (Previously Presented): The method of claim 8, wherein the solvent is selected from the group consisting of aromatic hydrocarbons, ketones, alcohols, and mixtures thereof.

23. (Previously Presented): The method of claim 8, wherein the solvent is selected from the group consisting of aromatic hydrocarbons, ketones, esters, and mixtures thereof.